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REASON & REVELATION

A Monthly Journal of Christian Evidences

NOVEMBER 2023 • VOL. 43 • NO. 11

HOMOCHIRALITY AND THE ORIGIN OF LIFE

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Homochirality and the Origin of Life

Joe Deweese, Ph.D.

Article In Brief... 

The hypothetical origin of life from non-living chemicals would require a complex series of steps each progressively less likely than the previous one. Chirality refers to the fact that some biomolecules have more than one possible three-dimensional configuration. In living systems, these molecules are often found in only one of two main configurations, which is known as the problem of homochirality. The authors of a recent study propose evidence for one possible solution for how homochirality could occur in nature. While they do find some interesting properties related to magnetism and chirality, they do not solve the issue of homochirality.

[**EDITOR'S NOTE:** The following article was written by A.P. auxiliary staff scientist Dr. Deweese who holds a Ph.D. in Biochemistry from Vanderbilt University and serves as Professor of Biochemistry and Director of Undergraduate Research at Freed-Hardeman University.]

WHAT would it take to make a living organism from a mixture of chemicals? Researchers interested in pursuing a naturalistic origin of life (i.e., origin of life without supernatural intervention) have been exploring this question for decades. Most school students learn about Miller-Urey experiments and the mixtures of molecules formed

under presumed conditions upon the early Earth.¹

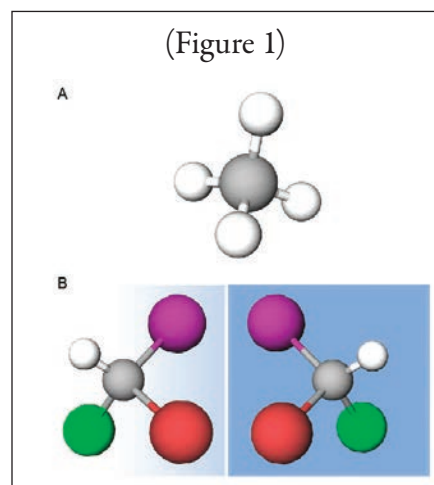
The general story of these experiments is that the researchers start with purified chemical components and mix them together combined with various forms of energy (e.g., sparks or light), and the chemicals are allowed to react for a time before being isolated and examined. What is the result? Yes, some molecules relevant to life can be formed, like amino acids, carbohydrates, and nucleotide bases.² But that is not the whole story because these building blocks alone are only one piece of the puzzle.

In their book, *Stairway of Life*, Change Tan and Rob Stadler identify a series of 12 steps that would

be required to go from non-living chemicals to a living organism.³ The steps are illustrated as a progressively complex staircase that is not simply traversed by time and chance. After the initial step of forming the building blocks of life, they point out the issue of homochirality and the challenge that it presents to the formation of complex biological molecules needed for living systems. What is homochirality and why does it matter?

To understand homochirality, one must take a quick detour into the chemistry of organic molecules. In science, organic molecules are carbon-based molecules involved in living organisms including amino acids, nucleotides, lipids, and carbohydrates. Organic molecules utilize carbon as the backbone element. Carbon has some very interesting properties such as the ability to bind to four different atoms at the same time in a tetrahedral structure (Figure 1A).

One of the consequences of being able to bind to four different atoms is that there can be molecules that have the same atoms but different arrangements of those atoms in 3D space (Figure 1B). This is the concept of chirality (kai-RAL-it-ee). When carbon is bound to four different atoms or groups, the carbon is known as a stereocenter, and there are rules for how these molecules

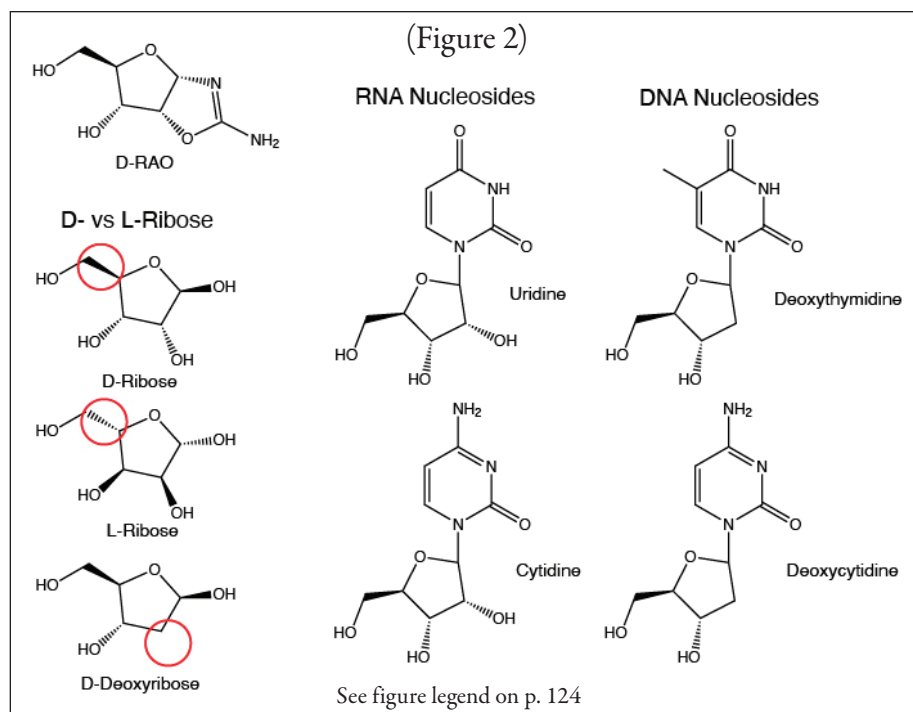


See figure legend on p. 124

are named to distinguish between “stereoisomers” or versions of the molecule that differ based upon the connections in 3D space. For instance, there are “left-handed” and “right-handed” versions of molecules like amino acids, sugars, and nucleotides. One convention for naming uses “L” and “D” to denote the two forms. The left-handed are denoted with an “L” (from *levo*, from the Latin *laevus* for left) before the name while the right-handed are denoted with a “D” (for *dextro* from the Latin *dexter* for right). For those familiar with medicine, dextrose is a common sugar solution given in IVs and is made of D-glucose (also called dextrose).

Why does this matter? L-amino acids are what are built and used by living organisms. D-ribose and D-deoxyribose (Figure 2) are the forms of sugar found in nucleotides (RNA and DNA, respectively) in living organisms. Thus, homochirality (i.e., the abundance of a single form like D- or L- for a given molecule) appears to be a **rule** for these fundamental biochemical molecules. The issue here is that in a pre-biotic system (one where life does not yet exist) there is no clear mechanism for preferentially causing the formation of one chiral form over another. This means there is no homochirality. Instead, when chemicals react in experimental systems, researchers tend to get mixtures of L- and D-forms of molecules. These mixtures are called racemic (rah-SEE-mick).

Recent work by origin of life researchers has suggested that L- and D- forms of chiral molecules have distinct magnetic properties.⁴ Could magnetism in the planet or in specific material deposits on the surface influence the formation of specific forms of chiral molecules? The researchers found that under intense magnetic conditions, they did see some preference in formation of crystals of a molecule in



either the L- or D-form. Of course, this seems to support the possibility that magnetism can influence the formation of either L- or D-form chiral molecules. But is that the whole story?

The scenario the researchers propose for their experiment is one of a shallow lake with magnetic deposits where these RAO crystals could form being in a state where the lake could alternately dry up and refill along with deposits of minerals, sediments, and other molecules combined with the influence of magnetic fields and solar radiation.⁵ What the researchers did in their study was to take ribo-aminooxazoline (RAO), which can be used as a precursor of pyrimidine nucleotides,⁶ and allow it to form crystals under intense magnetic field (Figure 2).⁷ Interestingly, their approach found that even though the RAO was a mixture of L- and D- forms, they could use magnetism and get a solution where 80% (or more with certain enrichment steps) of the molecules that crystallized were of one chiral form.⁸

There are a few things that need to be considered here. First, the researchers start with completely pure chemicals formed under specific laboratory conditions **that did not exist in any presumed pre-biotic Earth**. Additionally, they used purified chemicals and a tightly-controlled reaction to form the starting materials. In this case, they formed a racemic mixture of L- and D-RAO.

Second, most of what they demonstrated was a preferential **crystallization** under magnetic conditions. While not a perfect solution, it does get to an 80%/20% mixture. This is a 60% enantiomeric excess (ee) where ee is calculated by subtracting the minor form from the major form (80%-20% = 60% ee). They found they could further enrich this form and get the percentage to 100%, but this required **carefully designed steps**, which they **claim** could have resulted from a series of drying and refilling events of the hypothesized lake combined with other events.⁹

Third, the reactions are **tightly controlled laboratory reactions**

that **do not account** for variables of a presumed early Earth. For a detailed discussion of the problems, see Tan and Stadler.¹⁰ One issue that needs to be pointed out is that the authors claim RAO is a key precursor in the formation of RNA nucleotides.¹¹ While it is true that RAO can be used to form nucleotides in a laboratory setting, RNA nucleotides **are not formed like this in nature**.

Fourth, the magnetic field used in these experiments was **~6,000 times the magnetic field found on the Earth**. The authors recognize this but suggest the key here is not the field strength but the effects of the surface used in the study, which they claim is prebiotically feasible.¹²

Fifth, note that no nucleosides were formed—just a crystal of a **potential** nucleoside precursor. Nucleosides are bases attached to the sugar ribose without a phosphate group (Figure 2). The nucleosides under consideration are the “simpler” of the nucleosides, uridine and cytidine—called pyrimidines (Figure 2). Adenosine and guanosine are known as purines, and these would likely require another synthetic pathway.¹³ Nucleosides that have a phosphate group attached to the sugar are called nucleotides. In living organisms, nucleotides are connected in long chains with a phosphate between each ribose for RNA or deoxyribose for DNA.

The intention here isn’t to disparage the work—it is, in fact, very relevant and interesting to explore the magnetic properties of chiral molecules. Magnetic properties of molecules have been known for a long time and serve as the basis for analytical chemistry methods like nuclear magnetic resonance (NMR) and medical applications like magnetic resonance imaging (MRI). Thus, the more we understand magnetic properties in molecules, the more potential there is to impact

human health and understand the creation.

Taken together, the authors of a recent study examine a compound called RAO that can form two of the RNA nucleosides and found that with magnetism they could influence which stereoisomer of RAO formed a crystal.¹⁴ This is interesting but still does not solve the problem of homochirality or of the origin of biomolecules in living systems. Homochirality represents one among several significant chemistry challenges in the “stairway to life.”

FIGURE LEGENDS:

Figure 1: Carbon Atoms and Stereochemistry. A: Ball and stick model for a molecule of methane (CH_4) is shown. Carbon is in grey with hydrogen in white. There is a fixed angle between all four hydrogen atoms giving this molecule a tetrahedral structure. B: Carbon is attached to four different atoms (white, green, purple, and maroon). With four different groups, the carbon atom is chiral and can form stereoisomers or non-superimposable mirror images. These molecules have the same components, but a different arrangement of atoms in 3D space.

Figure 2: Structures of Relevant Molecules. Structures for RAO, ribose, and some nucleosides are shown with symbols indicating stereochemistry. The solid black wedges represent groups that point toward the viewer (out of the page) while hashed wedges are groups that point away from the viewer (into the page). Red circles are meant to draw attention to an example of where molecules differ.

ENDNOTES

- S. L. Miller (1953), “A Production of Amino Acids under Possible Primitive Earth Conditions,” *Science*, 117[3046]:528-529; S. L. Miller and H. C. Urey (1959), “Organic Compound Synthesis on the Primitive Earth,” *Science*, 130[3370]:245-251.
- Norio Kitadai and Shigenori Maruyama

(2018), “Origins of Building Blocks of Life: A Review,” *Geoscience Frontiers*, 9[4]:1117-1153, ISSN 1674-9871, <https://doi.org/10.1016/j.gsf.2017.07.007>.

- C. L. Tan and R. Stadler (2020), *The Stairway to Life* (Minneapolis, MN: EvoRevo Books).
- S. F. Ozturk and D. D. Sasselov (2022), “On the Origins of Life’s Homochirality: Inducing Enantiomeric Excess with Spin-Polarized Electrons,” *Proceedings of the National Academy of Sciences of the United States of America*, 119[28]:e2204765119.
- S. F. Ozturk, Z. Liu, J. D. Sutherland, and D. D. Sasselov (2023), “Origin of Biological Homochirality by Crystallization of an RNA Precursor on a Magnetic Surface,” *Science Advances*, 9[23], DOI: 10.1126/sciadv.adg8274.
- C. Anastasi, M. A. Crowe, M. W. Powner, and J. D. Sutherland (2006), “Direct Assembly of Nucleoside Precursors from Two- and Three-Carbon Units,” *Angewandte International Edition Chemie*, 45[37]:6176-6179; M. W. Powner, B. Gerland, and J. D. Sutherland (2009), “Synthesis of Activated Pyrimidine Ribonucleotides in Prebiotically Plausible Conditions,” *Nature*, 459[7244]:239-242.
- Ozturk, et al.
- Ibid.
- Ibid.
- Tan and Stadler.
- Ozturk, et al.; Anastasi, et al.; Powner, et al.
- Ozturk, et al.
- J. Xu, N. J. Green, D. A. Russell, Z. Liu, and J. D. Sutherland (2021), “Prebiotic Photochemical Coproduction of Purine Ribonucleosides and Deoxyribonucleosides,” *Journal of the American Chemical Society*, 143[36]:14482-14486.
- Ozturk, et al.

United States Postal Service STATEMENT OF OWNERSHIP, MANAGEMENT, and CIRCULATION Required by 39 USC 3685. 1. REASON AND REVELATION. 2. 1542-0922. 3. 9/13/2023. 4. Monthly. 5. 12. 6. \$14.00. 7. 230 Landmark Dr., Montgomery, AL 36117. 8. 230 Landmark Dr., Montgomery, AL 36117. 9. PUBLISHER, Apologetics Press, 230 Landmark Dr., Montgomery, AL 36117; EDITOR, Eric Lyons, 230 Landmark Dr., Montgomery, AL 36117; MANAGING EDITOR, Eric Lyons, 230 Landmark Dr., Montgomery, AL 36117. 10. Non-profit Apologetics Press, Inc., 230 Landmark Dr., Montgomery, AL 36117. 11. None. 12. No Change. 13. REASON AND REVELATION. 14. 9/13/2023. 15. Religion/Apologetics (see chart below). 16. Electronic Copy Circulation (see chart below) 17. November 2023. 18. Tommy Hatfield, General Manager, 9/13/2023.

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What is Rabbinic Judaism?

Justin Rogers, Ph.D.

[EDITOR'S NOTE: The following article was written by A.P. auxiliary writer Dr. Justin Rogers (Ph.D., Hebrew Union College–Jewish Institute of Religion). Dr. Rogers is Dean of the College of Biblical Studies and Professor of Bible and Judaic Studies at Freed-Hardeman University.]

MOST American Christians are undereducated on the beliefs and practices of their religious neighbors. As the American religious landscape becomes increasingly diverse, it is wise for Christians to learn about the groups that surround them. A basic understanding of the world religions makes us more sensitive to the beliefs and practices of our neighbors and equips us to reach others with our faith and to defend the Truth “with gentleness and respect.”¹ We will attempt to survey in this article the foundations of one world religion, the smallest of the so-called “three major world religions,” Judaism.

Modern Judaism is only partially based on what Christians call the Old Testament.² Personal piety came to replace sacrifice in Judaism long ago, in texts like *Midrash Leviticus Rabba*, which suggests a life of spiritual sacrifice is just as efficacious as a blood offering. Therefore, asking why Jews today do not

sacrifice is evidence of an unawareness of their beliefs and practices. Like Christians, Jews recognize the authority of the Hebrew Bible/Old Testament, but they **also** recognize the validity of later traditions and texts. Just as modern Catholicism draws on centuries of traditions that Catholics affirm as authoritative, so also modern Judaism draws on traditions passed down through the centuries through the rabbis. Therefore, like Catholicism, one may legitimately speak of Scripture **and Tradition** as the twin pillars of modern Judaism. (It is not without significance that Geza Vermes titled his 1961 work on Jewish interpretation *Scripture and Tradition in Judaism*.)

WHO ARE THE RABBIS?

THE term “rabbi” means “one greater than I” and was an honorific way of referring to one’s teacher. As far as our current state of knowledge is concerned, the term dates back no further than the first century A.D., and the New Testament is the earliest text to use it. Most scholars believe the rabbis are the successors of the Pharisees, the most popular Jewish group of the New Testament era. The rabbinic literature never uses the term “Pharisee,” but there are several reasons for regarding them as the predecessors of the rabbis. First, ancient sources

refer to figures such as Gamaliel and his son Simon as Pharisees, and both are claimed by the later rabbis (cf. Acts 5:34; Josephus³). Second, the Pharisaic movement was always carried by popular support, especially in Judea, whereas the two other main Jewish parties—the Sadducees and the Essenes—were either closely connected with the Temple (Sadducees) or were sectarian in nature (Essenes).⁴ Therefore, neither of the other two main Jewish sects had a major influence on the populace as a whole.

The main reason for connecting the Pharisees and the rabbis is that both groups considered their distinctive tradition **authoritative**.⁵ Jesus tends to agree with the Pharisees on most matters (e.g., Matthew 23:2-3) but criticizes their insistence on the authority of non-biblical tradition (e.g., Matthew 15:3; Mark 7:9). Since their tradition serves to exalt the authority of the Pharisees and the later rabbis, it is appropriate to discuss the concept in more detail.

THE RABBINIC TRADITION

BY design, the rabbinic tradition was to be transmitted orally, not to be written. The earliest rabbis, whose opinions are recorded in the Mishna, are called the *Tanna'im*, or “repeaters” of the oral tradition. The rule of repetition, rather than writing, remained in effect until Rabbi Judah “the Prince” codified **the Mishna** in ca. A.D. 200, the first written source of Rabbinic Judaism. A rabbinic document known as *Midrash Tanhuma*⁶ questions why God initially speaks “all” the words of His law (Exodus 20:1), and then later commands Moses to “write” them down (Exodus 34:27). The rabbis explain that God initially wanted the entire Law to be delivered orally, but after Moses expressed the desire to write it down, God condescended as follows:⁷ “Give them the Scrip-

(cont. on p. 128)

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tures in written form, but deliver the Mishna, the Aggada, and the Talmud orally.”⁸ This later Midrash expands on a common rabbinic theme, namely, that their teaching was to imitate God’s revelation at Sinai. They were to copy and read the written Law, and they were to memorize and repeat the oral law.⁹

The decision to write down the oral law was, therefore, seemingly a contradiction of the rabbis’ own policy. The rabbinic literature never works out the contradiction, but a number of modern scholars have offered suggestions.¹⁰ Perhaps it was simply a practical matter. One can imagine that the oral tradition eventually became too large to memorize, and different rabbis remembered different teachings in contradictory form. Therefore, writing was an attempt to standardize the rabbinic tradition, getting everyone “on the same page,” so to speak. It is also possible that the written form of the oral tradition was intended for private study to facilitate the rabbinic education. Modern scholars have analyzed the rhetoric of the Mishna in particular, finding that it is written to facilitate memorization. Ultimately, modern readers of the rabbinic literature are forced to live with a paradox: our only access to the oral law is in its written form.

WHY DOES THE ORAL TRADITION EXIST?

THE rabbis’ own summary of the rabbinic tradition is found at the beginning of the Mishnaic tractate *Pirke Avot*: “be patient in judgment, raise up many students, and build a fence around the Law” of Moses (1:1). The most programmatic of these commandments is the last. One of the primary aims of the rabbinic experiment was to protect the written law from being violated. The oral law was always viewed as a compliment, not a competitor, of the written Law

of Moses. Some sources feature the oral law as a distinct set of traditions preserved independently,¹¹ while others speak of the oral law as a set of authorized **interpretations** of the Mosaic Law and thus dependent on it.¹² The latter presentation is the one that seems more plausible historically.

The rabbinic traditions were well-intended to keep people from violating biblical law. Inventing the notion of an oral law served two related purposes. First, it helped to define what the 613 biblical laws in the Pentateuch actually meant. For example, the Law of Moses instructs the Israelites to do no work on the Sabbath (Leviticus 23:3) but gives few examples of what types of work violate the Law (Numbers 15:32-36 is a rare exception). By contrast, the Mishna—the first written version of the oral law—records some 39 categories of work forbidden on the Sabbath, unpacking each in extreme detail. If one were to observe the teachings of the rabbis, he could rest assured that he had kept the Law.

Second, claiming that the oral law is traceable to Moses on Sinai serves to authorize the rabbis as tradents of the tradition, and thus as the most qualified interpreters

of the Bible. In the marketplace of competing biblical interpretations, the claim to possess a stream of exceptional divine revelation would have helped the rabbis to assert their authority. The claim also ensured that no single rabbi possessed an authority of his own, for the rabbis studiously place themselves within an authorized tradition. The contribution of every esteemed sage lies in his ability to transmit accurately what he has received, not to add anything new.

WHAT IS THE MISHNA?

THE Mishna is the first written source of Rabbinic Judaism. In this document, we have a mythical account of the origins of the Jewish oral tradition.¹³ We are told that, on Mount Sinai, God revealed two laws to Moses, one to be written (the Pentateuch) and the other to be passed down orally. Moses shared this oral law with Joshua, Joshua with the elders of Israel, the elders of Israel with the biblical Prophets, and the biblical Prophets with “the men of the great assembly.” From here, the oral tradition was passed on to and through various individual sages down to the time of Rabbi Yohanan ben Zakkai,

Reason & Revelation is published monthly by Apologetics Press, Inc. Periodicals postage paid at Montgomery, AL. **Postmaster:** Send address changes to **Reason & Revelation**, 230 Landmark Dr., Montgomery, AL 36117; **ISSN:**[1542-0922] **USPS#** 023415.

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The Rabbinic Chain of Oral Tradition, according to Mishna, <i>Avot</i> .	
SOURCE	DATE
God	—
Moses	Late 15 th century B.C.
Joshua	Early 14 th century B.C.
The elders of Israel	14 th -9 th centuries B.C.
The Prophets	9 th -5 th centuries B.C.
The men of the Great Assembly	5 th -3 rd centuries B.C.
Simon the Just	Early 3 rd century B.C.
Antigonus of Soko	3 rd century B.C.
Jose ben Joezer and Jose ben Johanan	Early 2 nd century B.C.
Joshua ben Perachiah and Nittai the Arbelite	2 nd century B.C.
Judah ben Tabbai and Simon ben Shetach	1 st century B.C.
Shemaiah and Abtalion	1 st century B.C.
Hillel and Shammai	Late 1 st century B.C.
Gamaliel	1 st century A.D.
Simon ben Gamaliel	1 st century A.D.
Yohanan ben Zakkai	1 st -2 nd centuries A.D.

who, following the destruction of the Temple in A.D. 70, became the founder of the movement known to us in the rabbinic literature.

The Mishna is divided into six divisions, known in English as “orders:” (1) *Zeraim* (“Seeds”) on agriculture; (2) *Moed* (“festival”) on holidays; (3) *Nashim* (“women”) on regulations pertaining to the family; (4) *Nezikin* (“damages”) on cases and procedures in the Jewish court system; (5) *Kodashim* (“holy things”) on sacrificial procedures; and (6) *Tahorot* (“purities”) on ritual purity. These are the categorical groupings that encompass all of the laws governing Jewish life.

WHAT IS THE TALMUD?

THE Talmud, known as the *Bavli*, or Babylonian Talmud, is a commentary of sorts on the Mishna. The word *Talmud* is an Aramaic word meaning “teaching.”¹⁴ It includes much of the Mishna

along with what is called the *gemara*, or “complete teaching.” Actually, the Talmud does not cover all of the Mishna. Only 36.5 of the Mishna’s 63 tractates, comprising only four of its six “orders,” receive comment.¹⁵ It is unclear why much of the content is omitted, but the traditional explanation is that some of the Mishna’s Palestinian agricultural concerns were irrelevant to the Babylonian context of the Talmud.

The Talmud was compiled around A.D. 500 and was an effort to impose the rabbinic rules of the land of Israel on the Babylonian Jewish community. There is another Talmud, known as the “Jerusalem Talmud,” compiled in the land of Israel about A.D. 400, but it has not been considered worthy of the same status as the Babylonian Talmud. The same is true of another collection of rabbinic tradition hailing from the land of Israel, the *Tosefta* (compiled ca. A.D. 300). Since tra-

ditional Jews regard the collection represented by the Babylonian Talmud to be inclusive of the earlier rabbinic tradition (at least, theoretically), when the word “Talmud” is used, it is usually only the *Bavli* that is intended.

The Talmud contains much material that is attributed to the rabbinic oral tradition but unrecorded in the Mishna, the *Tosefta*, or the Jerusalem Talmud. Two categories of content describe the non-Mishnaic material that is not necessarily paralleled in the earlier collections.¹⁶ First, we have what is called *beraitot* (or, in the singular, *beraita*), which means “external content.” This material is “external” to the Mishna, but is nevertheless attributed to the *tanna'im*, or the sages of the Mishnaic period. Second, we have the teachings of the sages belonging to the generation after the Mishna. The rabbis of this era, who flourished in the third and fourth centuries A.D., are known as the *amora'im*, or “sayers.”

The Talmud is a monumental accomplishment, representing more than two million words of content and taking up an entire bookshelf in the standard editions. The Talmud is nearly five times longer than the entire Hebrew Bible/Old Testament, and is considered the authoritative expression of Jewish faith, though other rabbinic collections are also considered important for the tradition. For example, Jews traditionally treat the rabbinic commentaries, or *Midrashim*, with respect and mine them for encouraging material. Nevertheless, the Talmud remains the foundational text of Modern Judaism. As Talmud scholar Stephen Wald describes it,

The Talmud Bavli represents the growing literary achievement of this entire period of Jewish history—which is in fact often simply referred to as the “talmudic period.” It was ulti-

mately accepted as the uniquely authoritative canonical work of post-biblical Jewish religion, providing the foundation for all subsequent developments in the fields of *halakhah* [Jewish law] and *aggadah* [Jewish theology].... Despite manifest difficulties of language and content, the study of the Bavli has also achieved an unparalleled place in the popular religious culture of the Jewish people.¹⁷

CONCLUSION

MODERN Judaism is founded on rabbinic Judaism, which most likely has its roots in the Pharisaic movement of the first centuries A.D. The rabbis' foundational concept was the assertion that two laws were given on Sinai, one written and the other oral. The oral law was passed down from one generation of sages to the next so that the latest traditions of the tradition could be considered authoritative in their teaching. Therefore, if one accepted the oral tradition of the rabbis, one had to view with suspicion the teachings of all others. While the Pharisees apparently did not have as developed a notion of the oral tradition and its transmission, they nevertheless considered their traditions authoritative.

Eventually, the oral teachings of the rabbis were committed to writing, first in the Mishna (ca. A.D. 200), then in author writings of the so-called Tannaitic period. Finally, the Babylonian Talmud (ca. A.D. 500) became the greatest expression of authorized rabbinic teaching, incorporating the Mishna and many other traditions both from the Tannaitic and the Amoraic periods. It would be the Babylonian Talmud that Jews in the Middle Ages took as the final and fullest expression of their faith, and the text that continues to be shared with generations of Jews, both those training for the rabbinate and those seeking to grow

closer to the God of the covenant. If Christians hope to reach their Jewish friends with the Gospel, it is helpful to know something about their history, tradition, and literature.¹⁸

ENDNOTES

- ¹ 1 Peter 3:15, ESV.
- ² Jewish people refer variously to the Scriptures (the "Protestant" Christian Old Testament) as the Bible, the TaNaK (an acronym for the Law, the Prophets, and the Writings—the *Torah*, the *Nevi'im*, and the *Kethuvim*), or *Mikra* ("what is written").
- ³ Flavius Josephus (1987 reprint), *The Life of Flavius Josephus* in *The Works of Josephus*, trans. William Whiston (Peabody, MA: Hendrickson), 190-196.
- ⁴ On the Pharisees, Sadducees, and Essenes as the three main Jewish groups, along with their characteristic teachings, see Josephus, *Jewish War*, 2:119-166; *Antiquities*, 13:171-173.
- ⁵ For the Pharisees, e.g., Mark 7:1-13; Josephus, *Antiquities* 13.297, 408; for the rabbis, e.g., Mishna, *Avot* 1-2.
- ⁶ Published by Solomon Buber.
- ⁷ All translations of ancient languages are mine unless otherwise noted.
- ⁸ *Ki Tisa* 17.
- ⁹ Cf. Jerusalem Talmud, *Megilla* 4:1.
- ¹⁰ See Elizabeth Shanks Alexander (2007), "The Orality of Rabbinic Writing," *The Cambridge Companion to the Talmud and Rabbinic Literature*, ed. Charlotte Elisheva Fonrobert and Martin S. Jaffee (Cambridge: Cambridge University Press),

pp. 38-57.

¹¹ E.g., Babylonian Talmud, *Erubin* 54b.

¹² E.g., Babylonian Talmud, *Menahot* 29b.

¹³ *Avot* 1-2.

¹⁴ The Mishna is written in Hebrew, but the Babylonian Talmud (when it does not quote the Mishna) is written in Aramaic. Therefore, the rabbis who compiled the Talmud were bilingual.

¹⁵ The Talmud excludes all of *Zeraim* with the exception of the tractate *Berakot* and all of *Tahorot* with the exception of the tractate *Niddah*.

¹⁶ On the complex relationship between the Babylonian Talmud and earlier rabbinic material, see H.L. Strack and Günter Stemberger (1992), *Introduction to the Talmud and Midrash*, trans. and ed. Markus Bockmuehl (Philadelphia: Fortress), pp. 197-201.

¹⁷ Stephen Wald (2007), "Talmud, Bavli," in *The Encyclopedia Judaica*, ed. Fred Skolnik and Michael Berenbaum (San Francisco/Jerusalem: MacMillan/Keter), second edition, 19:470.

¹⁸ To learn more, the *Sefaria* website and mobile application are excellent (sefaria.org).



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Biblical Roots for American Government

Robert C. Veil, Jr., J.D.

[EDITOR'S NOTE: A.P. auxiliary writer Robert Veil, Jr. formerly served as a district attorney for the Washington County State's Attorney's Office (Maryland), and previously maintained an active private law practice. He currently preaches in Martinsburg, West Virginia.]

IT is a fact that many U.S. Americans do not understand the nature and beauty of our three-branch system of government. Even more to be lamented is the fact that most do not realize that the inspiration for such a brilliant system is found in the Bible itself.

The federal government of the United States of America consists of three distinct branches: the Legislative, the Executive, and the Judicial. These are created and described in that order by the first three Articles of the U.S. Constitution: (1) "All **legislative** powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives." (2) "The **executive** Power shall be vested in a President of the United States of America." (3) "The **judicial** Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish."¹ Thus, the vital powers of government are identified and described in the first sentence of each of the first three Articles of our founding document. What could be more simple and yet profound in the establishment of a nation?

Now, here's a question: How did our founding fathers understand that there **are** three vital powers of government? Why not two? Or, as with many nations, why not only one? Could it be that they were familiar with principles enunciated in the Bible centuries ago?

In Isaiah 33:22, the Bible states, "For Jehovah is our **judge**, Jehovah is our **lawgiver**, Jehovah is our **king**; he will save us." This text, written 700 years before Christ, envisions and clearly identifies the three essential functions of a fully operational government, namely the judicial, the legislative, and the executive. As our Constitution would later reiterate, God set forth the need for lawmaking, law enforcement or execution, and law interpreting. Isaiah wrote these lines by inspiration of the Holy Spirit (2 Timothy 3:16; 2 Peter 1:21).²

So what we have in Isaiah's 8th-century B.C. prophecy is divine guidance that was, whether intentionally or not, followed by the founding fathers of the United States 2,500 years later. They implemented in the founding documents of our nation profound yet simple principles laid out by God in the Bible ages before.

We are not surprised that our founding fathers would have taken note of this, for they were, by and large, extremely Bible literate. They knew and appreciated the great value of the Bible, and this is reflected over and over in their work. It is reflected in the common law which they inherited and in the vast array of both criminal and civil

laws which they furthered and made possible.³ Many of these we take for granted today, not even realizing their divine source.

Every properly functioning government must provide for the three types of power discussed above, but it was a biblical deduction on the part of our founding fathers that these three powers could work together and keep each other in "checks and balances." The remarkable unity of these three branches no doubt largely accounts for the longevity and great success of the American experiment.

When God the Father (the divine lawgiver) sent his Son to execute his will, Jesus Christ was acting as the divine executive. And the Holy Spirit, who provides order and clarity always, supplied the necessary judicial power for such an intelligent system to function smoothly. Working together in harmony and unity of purpose, the three persons of the Godhead remind us of the three functions of all legitimate and effective governmental systems.

Nations that follow God's way tend to advance and succeed. And nations which depart from God's way tend to fail, sometimes after much misery. U.S. citizens should be thankful that we live in a nation founded upon godly principles. May we ever appreciate and strive to prolong such freedoms and blessings, which are ours only by the grace of God. And may we always give glory and honor to Him whose wisdom inspires every good and successful work.

ENDNOTES

¹ Emp. added.

² For a wealth of material on the inspiration of the Bible, visit apologeticspress.org. See also Kyle Butt's and Dave Miller's respective books, *Is the Bible God's Word?* and *The Bible Is From God*; <https://store.apologeticspress.org/products/apbkkb0004>; https://store.apologeticspress.org/products/bible_is_from_god.

³ For more information, see Dave Miller's excellent book, *God & Government* (Montgomery, AL: Apologetics Press), p. 103.



NOTE FROM

The Editor



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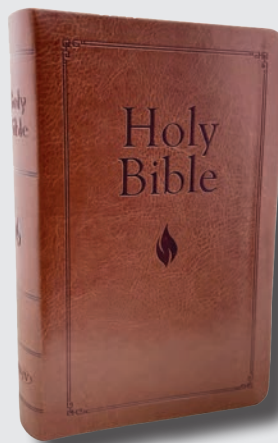
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